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ABSTRACT

This study examined (1) the psychometric qualities of a modified version of the Parent Behavior Form (PBF) designed to obtain ratings of parental behavior toward a child from four different family members, and (2) the effects of aggregating across raters on the reliability and generalizability of ratings of parental behavior. Subjects were 744 individuals from 186 families. The four participants from each family were a freshman college student, the mother, the father, and one sibling within 3 years of the student's age. Results showed the PBF to have overall good reliability and a consistent pattern of three factors--labeled warm involvement, harsh control, and lax control--for ratings of both mother and father by all four family members. These results suggest that the PBF can be a reliable and useful research instrument. It is probably unnecessary to reject data of subjects scoring high on either of the instrument's two validity indices. Results parallel those of Schwartz and others' study (1985) which found that aggregating ratings of multiple family members greatly increased the reliability of ratings. Findings of the Schwartz study and the present study supply strong support for the continued use of children's reports as a means of measuring childrearing behavior. (RH)

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Assessing Childrearing Behaviors with the Parent Behavior Form (PBF): A Comparison of Ratings by Mother, Father, Child, and Sibling[1]

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Assessing Childrearing Behaviors with the Parent Behavior Form (PBF): A Comparison of Ratings by Mother, Father, Child, and Sibling

The present paper, Assessing Childrearing Behaviors with the Parent Behavior Form, is a companion work to a 1985 article by Schwarz, Barton-Henry, and Pruzinsky in which they analyzed data on the Child's Report of Parental Behavior Inventory--or CRPBI. Schwarz et al. undertook the CRPBI study in response to what they saw as an abandonment of children's reports as a means of measuring childrearing behavior in favor of behavioral assessment methods. Schwarz et al. sought to demonstrate the reliability of ratings made by knowledgeable informants by providing evidence for the utility of aggregating, or combining, ratings across raters.

Schwarz et al. had four different family members each rate both parents on the CRPBI. They found that the factor structure of the CRPBI was highly similar across ratings by the four family members, as well as across the two ratee targets--the mother and the father. This similarity in the factor structure indicated that the CRPBI's items and scales had similar meanings for raters of different ages and roles in the family. Therefore, aggregation of ratings across multiple informants would not distort the meaning of scale scores; aggregation would, instead, increase the reliability and validity of the family's ratings. In fact, Schwarz et al. demonstrated that aggregating across four raters doubled the generalizability of the factor scores.

Schwarz et al. made two general conclusions: (1) that the ratings

of each family member captured a small portion of the true variance...and a substantial proportion of error, which could be reduced by aggregating the scores of a number of raters; and (2) that the generalizability of scores of single informants was too low for research purposes, whereas the generalizability of four-rater aggregate scores was quite adequate. Once again, Schwarz et al. demonstrated that aggregating ratings of a number of family members could both reduce the proportion of error in the overall rating and increase the generalizability of ratings to a level adequate for research purposes.

The present projects' purposes are twofold: (1) We sought to build on the findings of Schwarz et al. by examining the effects of aggregating across raters on the reliability and generalizability of ratings of parental behavior using another childrearing rating scale,--the Parent Behavior Form, or PBF,--thereby providing more evidence for the reliability and utility of ratings of childrearing behavior by knowledgeable informants; and (2) we sought to examine the psychometric qualities of the PBF itself.

The PBF was devised by Worell and Worell (1974) and it consists of two identical sets of 135 items, one pertaining to the mother and the other to the father. These items constitute 15 subscales, 13 scales assessing childrearing behavior and 2 validity scales. Each item describes a particular behavior on the part of the parent, and the respondent rates each statement as "like," "somewhat like," or "not like" that parent. For the present investigation, we modified these

statements in order to obtain ratings of parental behavior toward the subject from four different family members.

The subjects were 744 individuals from 186 families. The four participants from each family were a freshman college student,--of which 93 were male and 93 were female,--the mother, the father, and one sibling who was within three years of the student's age. Mean subject and sibling ages were approximately 18 years.

Students completed the PBF and other questionnaires in groups of 15 to 20 subjects. Questionnaires were mailed separately to the mother, father, and sibling; each family member was given a separate envelope in which to return the materials, and each was encouraged to work independently. In all, there were four rater types--the mother, father, student subject, and sibling--each of whom rated two targets--the mother and the father. Thus, the data set consisted of eight unique sets of ratings: the mother, father, subject and sibling...rating the mother's childrearing behavior toward the subject; and the father's childrearing behavior toward the subject was the target of the four raters as well.

Our analyses addressed the following areas: (1) the internal consistency of each scale for the respective raters and targets, (2) the agreement, or convergence, among the four rater types, (3) the similarity of factor structures obtained with ratings made by each of the four raters, (4) the comparability of means and standard deviations of estimated factor scores across rater types, and (5) the extent to which the generalizability of scores could be improved by

aggregating data over subscales and over raters.

I will present, first, data on the reliability of the 13 content scales. Overall, the subscales of the PBF showed good reliability, at a level adequate for most research purposes; although, when either parent rated him or herself, internal consistency tended to be lower. In addition, both self and spouse ratings tended to be less internally consistent on scales assessing less socially desirable traits; however, ratings by the student and sibling were unaffected by the desirability of the scales. In general, then, the internal consistency data show that raters responded to the scales of the PBF in a consistent and like manner.

The second set of analyses assessed whether the four members of the family seemed to use the same underlying dimensions of description...in other words, whether the 13 scales had the same factor structure for all 4 rater types. Factor analyses of the 13 scale scores--for each rater's rating of each parent--were done, and all analyses yielded three factors which we termed Warm Involvement, Harsh Control, and Lax Control. (The pattern of subscale clusters and the factor weights are presented in the two tables of the handout.)

For subsequent analyses, we generated estimated factor scores. These factor scores represent the mean scale score for all subscales loading highest on each factor. Three estimated factor scores were calculated for each rater/ratee pair, and analyses of variance were performed on the data to assess systematic differences in estimated factor scores among the 4 rater types. The results showed that

neither subject sex nor sibling sex was related to differences in ratings of parents' behavior with respect to the dimensions of Warm Involvement, Harsh Control, or Lax Control; however, all three factor scores for both mother and father were significantly affected by who was doing the rating. Both parents tended to rate themselves higher on Warm Involvement than did other raters, and both parents also reported their spouses and themselves to be less lax in their control than did the subject or sibling. Finally, mothers tended to rate both themselves and their husbands as less harsh than did the other raters.

In general, mothers and fathers tended to show less variability when reporting their own warm involvement or harsh control, suggesting they avoided extremes of both favorability and unfavorability in presenting themselves. Overall, fathers' ratings appear to be the least valid (in the sense of lower agreement with the average of the three remaining raters), while the students' and the siblings' ratings seem to be most valid, particularly when they rate the father. To repeat, it is the students' and the siblings' ratings that appear to be the most valid, while ratings by the father seem to be the least valid, particularly when he rates himself.

In addition to exploring the 13 childrearing scales, we also investigated the two validity indices: the Social Desirability scale and the Irrationality scale. Noteworthy is the fact that the social desirability scores of each rater, rating both targets, approached the maximum of 3.0, which means that all four raters were willing to describe parents in quite favorable terms. Likewise, the

irrationality ratings by all raters, of both targets, were close to the minimum value of 1.0, which indicates a general tendency to avoid attributing irrational behavior to the mother and the father.

We investigated the "validity" of the validity indices by dividing respondents into groups based on their social desirability scale scores, and on their irrationality scores. We then correlated each rater's scores with aggregates of the three remaining raters, which served as our validity criteria. We found there to be no systematic association between levels of the validity indices and the magnitude of the aggregated validity coefficients. In other words, the reports of raters with high scores on the Social Desirability and Irrationality subscales appear to be no less valid than reports of individuals who scored low on these two indices. Therefore, it seems that neither the Social Desirability scale nor the Irrationality scale serve to accurately identify raters whose scores are less valid than those of other raters. In light of this, we recommend retaining subjects despite high scores on the validity indices.

Further analyses showed single informants to agree only at a very modest degree--too low for use in research. However, as expected, aggregation increased the generalizability of estimated factor scores to a level that is suitable for research purposes, indicating that the precision of measurement can be increased by aggregating across subscales and raters. The greatest increase in generalizability derived from shifting from single raters to two-rater aggregates, while further addition of raters to aggregates continued to enhance

generalizability, but at a lesser rate. Once again, adding a second rater to form a two-rater aggregate substantially increased generalizability of ratings. Aggregating still more raters continued to increase generalizability, but to a lesser extent. An aggregate of the subject and a sibling appears to be the "essential" aggregate,--being most valid. Three-rater aggregates may then be formed with the addition of the mother.

In summary, the results of this study showed the PBF to have overall good reliability and a consistent pattern of 3 factors for ratings of both mother and father by all 4 family members. These results suggest that the Parent Behavior Form can be a reliable and useful research instrument. Results also suggest that it is likely unnecessary to reject data of subjects scoring high on either of the two validity indices. Finally, results of this study parallel those of Schwarz et al.'s CRPBI study: aggregating ratings of multiple family members greatly increases the reliability of ratings made by knowledgeable informants; and the combined findings of Schwarz et al. and the present study supply strong support for the continued use of children's reports as a means of measuring childrearing behavior as long as multiple informants are recruited and results are aggregated across raters.

Footnotes

[1]This paper was presented to the Conference on Human Development in Nashville, TN April 4, 1986.

Assessing Childrearing Behaviors with the Parent Behavior Form
A Comparison of Ratings by Mother, Father, Child & Sibling

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Table 2

Comparison of Promax Rotated Factor Structure (Correlations) of Ratings of Mother by Four Informants on the PBF

	Factor Name											
Subscale	Warm Involvement				Harsh Control				Lax Control			
	MOM	DAD	SIB	SUBJ	MOM	DAD	SIB	SUBJ	MOM	DAD	SIB	SUBJ
	I	I	I	I	III	II	II	II	II	III	III	III
Cognitive Independ.	.80	.85	.84	.88								
Cognitive Curiosity	.69	.76	.83	.78								
Active Involvement	.72	.76	.79	.73								
Cognitive Competency	.63	.69	.67	.71								
Warmth	.82	.84	.85	.82			-.55	-.51				
Egalitarianism	.70	.79	.77	.80		-.42	-.66	-.52				
Hostile Control		-.47	.55	-.52	.62	.76	.85	.78	-.48			
Rejection			-.57	-.52	.63	.56	.80	.75				
Achievement Control					.69	.68	.81	.69				
Strict Control						.88	.88	.84	-.83			
Punitive Control						.79	.80	.59	-.82	-.46	-.40	-.60
Conformity						.63	.55	.57	-.64			
Lax Control									.62	.89	.96	.86

Table 3

Comparison of Promax Rotated Factor Structure (Correlations) of Ratings of Father by Four Informants on the PBF

	Factor Name											
Subscale	Warm Involvement				Harsh Control				Lax Control			
	MOM	DAD	SIB	SUBJ	MOM	DAD	SIB	SUBJ	MOM	DAD	SIB	SUBJ
	I	I	I	I	III	II	II	II	II	III	III	III
Cognitive Independ.	.88	.81	.88	.85								
Cognitive Curiosity	.80	.80	.76	.69								.46
Active Involvement	.79	.80	.80	.79								
Cognitive Competency	.69	.64	.66	.52								.60
Warmth	.83	.80	.86	.83	-.41							
Egalitarianism	.72	.74	.76	.83	-.55		-.50					
Hostile Control	-.49		-.42	-.67	.80	.81	.85	.53				
Rejection	-.58		-.44	-.73	.68	.68	.76					
Achievement Control					.63	.71	.74	.73	.45			
Strict Control					.84	.69	.83	.73		-.63	-.42	
Punitive Control					.83	.47	.78	.64		-.76	-.57	-.46
Conformity					.52	.43	.43	.60		-.56		
Lax Control									.88	.81	.94	.78